

PERFORMANCE SPECIFICATION SHEET  
SWITCHES, PUSH, MOMENTARY, 2 CIRCUIT, UNSEALED AND SEALED

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the switches described herein shall consist of this specification and the latest issue of MIL-PRF-8805.

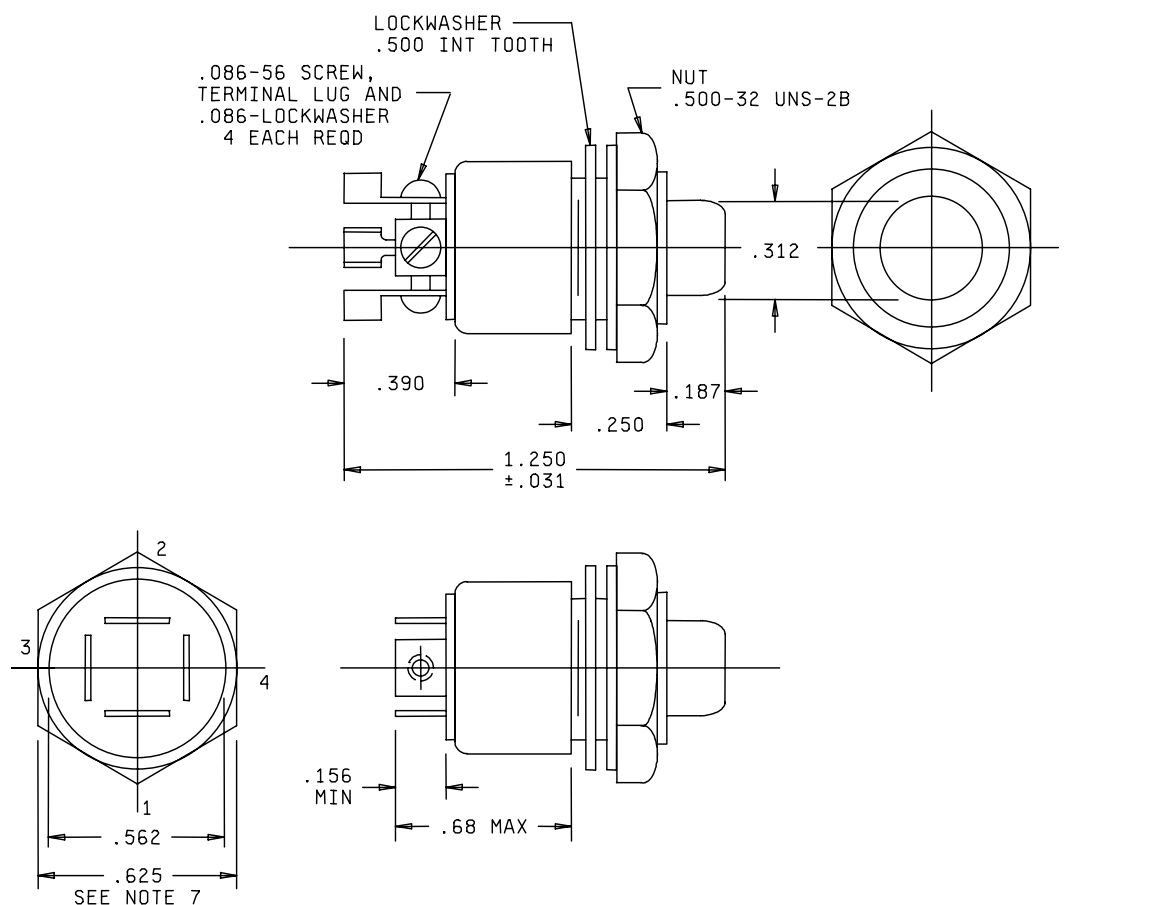
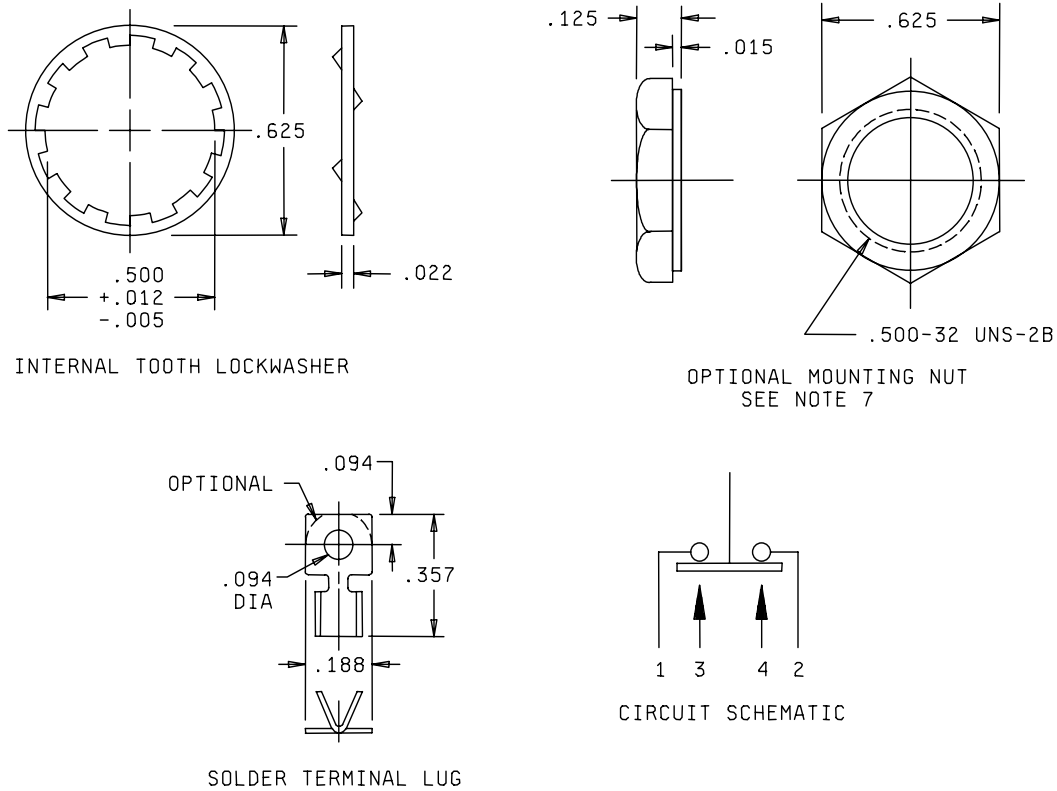


FIGURE 1. Dimensions and configurations.

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Inches	mm	Inches	mm	Inches	mm
.001	0.03	.125	3.18	.390	9.91
.005	0.13	.187	4.75	.500	12.70
.008	0.20	.188	4.78	.515	13.08
.012	0.30	.220	5.59	.562	14.27
.015	0.38	.250	6.35	.625	15.88
.022	0.56	.281	7.14	.68	17.27
.031	0.79	.312	7.92	1.250	31.75
.094	2.39	.375	9.53		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise stated, tolerance is  $\pm 0.015$  (0.38 mm).
4. Exact shape of switch optional provided dimensions specified are not exceeded.
5. Panel seal gasket supplied with enclosure design 6 (splashproof) switches.
6. Recommended mounting hole:  $0.515 \pm 0.008/-0.001$  diameter.
7. Optional mounting nut is MS25082-B22, MS25082-C22, or equivalent as applicable. Alternative base metals and protective finishes, as approved by the qualifying activity, may be utilized for optional mounting nut. Dimensions shall be in accordance with referenced hardware specification.

FIGURE 1. Dimensions and configurations (continued).

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REQUIREMENTS:

Dimensions and configurations: See figure 1.

Enclosure design: 1 (unsealed), 2 (dust-tight), or 6 (splashproof) as defined by Part or Identifying Number (PIN).

Temperature characteristic:

MS16712-1 and MS16712-2: Room temperature only. (MS16712 was superseded by MIL-PRF-8805/20; the MS16712 Part Numbers (PINS) were retained.)

All other PIN's: 1 (-55°C to +85°C).

Shock type: H (high-impact). No opening or closing of contacts shall exceed 20 ms duration.

Sinusoidal vibration grade: 2 (10 Hz to 2,000 Hz)

Weight: .02 pound approximately.

Operating characteristics:

Actuating force: 3.5 pounds  $\pm$  1 pound

Total travel: .085 inch  $\pm$  .015 inch.

Strength of actuating means:

MS16712-1 and MS16712-2: 25 pounds. (MS16712 was superseded by MIL-PRF-8805/20; the MS16712 Part Numbers (PINS) were retained.)

All other PIN's: 50 pounds.

Terminal strength: 5 pounds.

Material

Mounting nut:

MS 16712-1 and MS16712-2: Clear Finish. (MS16712 was superseded by MIL-PRF-8805/20; the MS16712 Part Numbers (PINS) were retained.)

All other PIN's: Black Finish

Dielectric withstanding voltage:

MS16712-1 and MS16712-2: In qualification inspection table after electrical endurance, the dielectric withstanding voltage points of application between terminals is not applicable. (MS16712 was superseded by MIL-PRF-8805/20, the MS16712 Part Numbers (PINS) were retained.)

Mechanical endurance:

MS16712-1 and MS16712-2: 50,000 cycles minimum. (MS16712 was superseded by MIL-PRF-8805/20; the MS16712 Part Numbers (PINS) were retained.)

All other PIN's: 200,000 cycles minimum.

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Electrical ratings:

Endurance testing: See table I.

Qualification:

Group submission: See table II.

Part number: See table III.

TABLE I. Electrical ratings (endurance testing).

Load	Volts	Amperes	Endurance cycles
Resistive	115 V ac, 400 Hz	10	25,000 at sea level
	28 V dc	10	25,000 at sea level
Lamp	115 V ac, 400 Hz	3	25,000 at sea level
	28 V dc	3	25,000 at sea level
Inductive load (140 millihenries $\pm 20\%$ )	115 V ac, 400 Hz	5	25,000 at sea level
	28 V dc	5	5,000 at 50,000 feet
.5 power factor inductive	120 V ac, 60 Hz	7.5	40,000 at sea level
Inductive, 2 henrys	230 V dc	0.05	5,000 at sea level

TABLE II. Group submission qualification inspection.

Inspection	Sample	Extent of Approval
Group I	All sample units	All
Group II	Unsealed, temperature characteristic 1: 2 samples Splashproof, temperature characteristic 1: 2 samples	
Group IV	Unsealed: 2 samples	
Group V	Unsealed: 2 samples	
Group VI	Dust-tight, temperature characteristic 1: 4 samples	
Group VII	Dust-tight, temperature characteristic 1: 16 samples	
Group VIII	Dust-tight: 1 sample Splashproof: 1 sample	

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TABLE III. PIN's and charateristics.

PIN	Enclosure design	Button color <u>1/</u>	Mounting nut finish	Temperature characteristic	Mechanical Endurance cycles
MS16712-1	Unsealed	Black	Clear	Room temperature	50,000
MS16712-2	Unsealed	Red	Clear	Room temperature	50,000
M8805/20-11	Unsealed	Black	Black	1 (-55°C to +85°C)	200,000
M8805/20-12	Unsealed	Red	Black	1 (-55°C to +85°C)	200,000
M8805/20-13	Unsealed	Orange	Black	1 (-55°C to +85°C)	200,000
M8805/20-14	Unsealed	Yellow	Black	1 (-55°C to +85°C)	200,000
M8805/20-15	Unsealed	Green	Black	1 (-55°C to +85°C)	200,000
M8805/20-16	Unsealed	Blue	Black	1 (-55°C to +85°C)	200,000
M8805/20-17	Unsealed	Violet	Black	1 (-55°C to +85°C)	200,000
M8805/20-18	Unsealed	Gray	Black	1 (-55°C to +85°C)	200,000
M8805/20-19	Unsealed	White	Black	1 (-55°C to +85°C)	200,000
M8805/20-21	Dust-tight	Black	Black	1 (-55°C to +85°C)	200,000
M8805/20-22	Dust-tight	Red	Black	1 (-55°C to +85°C)	200,000
M8805/20-23	Dust-tight	Orange	Black	1 (-55°C to +85°C)	200,000
M8805/20-24	Dust-tight	Yellow	Black	1 (-55°C to +85°C)	200,000
M8805/20-25	Dust-tight	Green	Black	1 (-55°C to +85°C)	200,000
M8805/20-26	Dust-tight	Blue	Black	1 (-55°C to +85°C)	200,000
M8805/20-27	Dust-tight	Violet	Black	1 (-55°C to +85°C)	200,000
M8805/20-28	Dust-tight	Gray	Black	1 (-55°C to +85°C)	200,000
M8805/20-29	Dust-tight	White	Black	1 (-55°C to +85°C)	200,000
M8805/20-61	Splashproof	Black	Black	1 (-55°C to +85°C)	200,000
M8805/20-62	Splashproof	Red	Black	1 (-55°C to +85°C)	200,000
M8805/20-63	Splashproof	Orange	Black	1 (-55°C to +85°C)	200,000
M8805/20-64	Splashproof	Yellow	Black	1 (-55°C to +85°C)	200,000
M8805/20-65	Splashproof	Green	Black	1 (-55°C to +85°C)	200,000
M8805/20-66	Splashproof	Blue	Black	1 (-55°C to +85°C)	200,000
M8805/20-67	Splashproof	Violet	Black	1 (-55°C to +85°C)	200,000
M8805/20-68	Splashproof	Gray	Black	1 (-55°C to +85°C)	200,000
M8805/20-69	Splashproof	White	Black	1 (-55°C to +85°C)	200,000

1/ Button colors shall be in accordance with FED-STD-595 as follows: Red-11105, black-17038, orange-12510, yellow-13655, green-14090, blue-15102, violet-17142, gray-16493, white-17886.

**NOTE:** (MS16712 was superseded by MIL-PRF-8805/20, the MS16712 Part Numbers (PINS) were retained.)

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Referenced Documents:

FED-STD-595  
MIL-PRF-8805  
MS25082

Custodians:

Air Force - 11  
Army - CR  
DLA - CC  
Navy – EC

Preparing activity:  
DLA - CC

(Project 5930-1836)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at [www.dodssp.daps.mil](http://www.dodssp.daps.mil).